ARSD College, University of Delhi

Model Course Handout/Lesson Plan

Course Name : B.Sc. (Physics Sc. Computer Science) Lab						
Semester	Course Code	Course Title	Lecture (L)	Tutorial (T)	Practical (P)	Credit (C)
IVth	**BSCS08B**	**Programming in Java**	2		2	4
Teacher/Instructor(s)		Jag Mohan				
Session		July -Dec 2022				

Course Description:

This course introduces fundamental concepts of Object Oriented Programming using Java. Basic

concepts such as data types, expressions, control structures, functions and arrays are covered.
Students are exposed to extensive Java programming to solve practical programming problems

Course Learning Outcomes:
On successful completion of the course, students will be able to:
1. develop and execute Java programs using iteration and selection.
2. create classes and their objects.
3. implement OOPS concepts to solve problems using JAVA

List of Experiments:

Details of the Lab Course		
Session	Name of Experiment	Contact Hours
1	Write a program to find the largest of n natural numbers.	2
2	Write a program to find whether a given number is prime or not.	2
3	Write a menu driven program for following: a) display a Fibonacci series b) compute Factorial of a number c) to check whether a given number is odd or even. d) to check whether a given string is palindrome or not.	2
4	Write a program to print the sum and product of digits of an Integer and reverse the Integer.	4
5	Write a program to create an array of 10 integers. Accept values from the user in that array. Input another number from the user and find out how many numbers are equal to the number passed, how many are greater and how many are less than the number passed.	4

6	Write a program that will prompt the user for a list of 5 prices. Compute the average of the prices and find out all the prices that are higher than the calculated average.		4
7	Design a class named Car, having registration number, model and engine as its private members. Here engine is an object of a class called Engine with the private members: Chassis number and make. Define a suitable constructor of Car and override toString() Method to print the details of a car. Assume appropriate data types for the instance Members of the classes. Write a Java program to test the above class.		4
8	Write a program that computes the area of a circle, rectangle and a Cylinder using function overloading.		4
9	Write a Java for the implementation of Multiple inheritance using interfaces to calculate the area of a rectangle and triangle.		4
		Total	30

Suggested Books:

Sl. No.	Name of Authors/Books/Publishers	Year of Publication/Reprint
1.	Horstmann, C. S. (2017). Core Java - Vol. I – Fundamentals (10th Edition). Pearson	2017
2.	Balagurusamy, E. (2014). Programming with JAVA: A Primer (5th Edition). McGraw Hill Education (India) Private Limited.	2014
3	Schildt, H. (2018). Java: The Complete Reference (10th Edition). McGraw-Hill Education.	2018
4.		
5.		

Evaluation Scheme:

No.	Component	Duration	Marks
1.	Internal Assessment ● Quiz/Viva ● Observation & Record ● Attendance ● Model Exam		25
2.	End Semester Examination	2 hr	50